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River Center, 111 North Canal Street, 8th Floor, Suite 855,
Chicago, IL 60606 • (312) 993-1067

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-7367

Mr. Steven J. Faryan
Deputy Project Officer
Emergency Response Section
U.S. Environmental Protection Agency
11th Floor
230 South Dearborn St.
Chicago, Illinois 60604

August 4, 1989

TAT-05-G2-01237

Re: Denune/Westfall Site, Columbus, Ohio
TDD# 5-8905-22

Dear Mr. Faryan:

On May 25, 1989, the U.S. Environmental Protection Agency (U.S. EPA) tasked the Technical Assistance Team (TAT) to investigate the Denune/Westfall site in Columbus, Ohio. The property, which is reportedly owned by Harry Denune and leased to Tracy Westfall, is an operating metal scrap yard. This letter report details TAT observations and provides a cost estimate for the removal and disposal of polychlorinated biphenyl (PCB)-contaminated oils and debris present at the site.

The Ohio Environmental Protection Agency (OEPA) received an anonymous report on May 24, 1989, that material transfer operations at the Denune/Westfall site had resulted in the release of suspected PCB-contaminated oil into the surrounding environment. After inspecting the site, the OEPA suspected that at least seven drums, one dumpster, and one roll-off box were contaminated with PCBs. Mr. Westfall had drained transformer oil into the seven drums and was storing the transformer carcasses in a 40-yd^3 roll-off box. The OEPA was concerned that the drums, dumpster, and roll-off box (which are outside) would overflow and/or leak PCB-contaminated water/oil as a result of recent, heavy rainfalls. Therefore, the OEPA asked the U.S. EPA to determine if site conditions met the requirements that may warrant an emergency removal action under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

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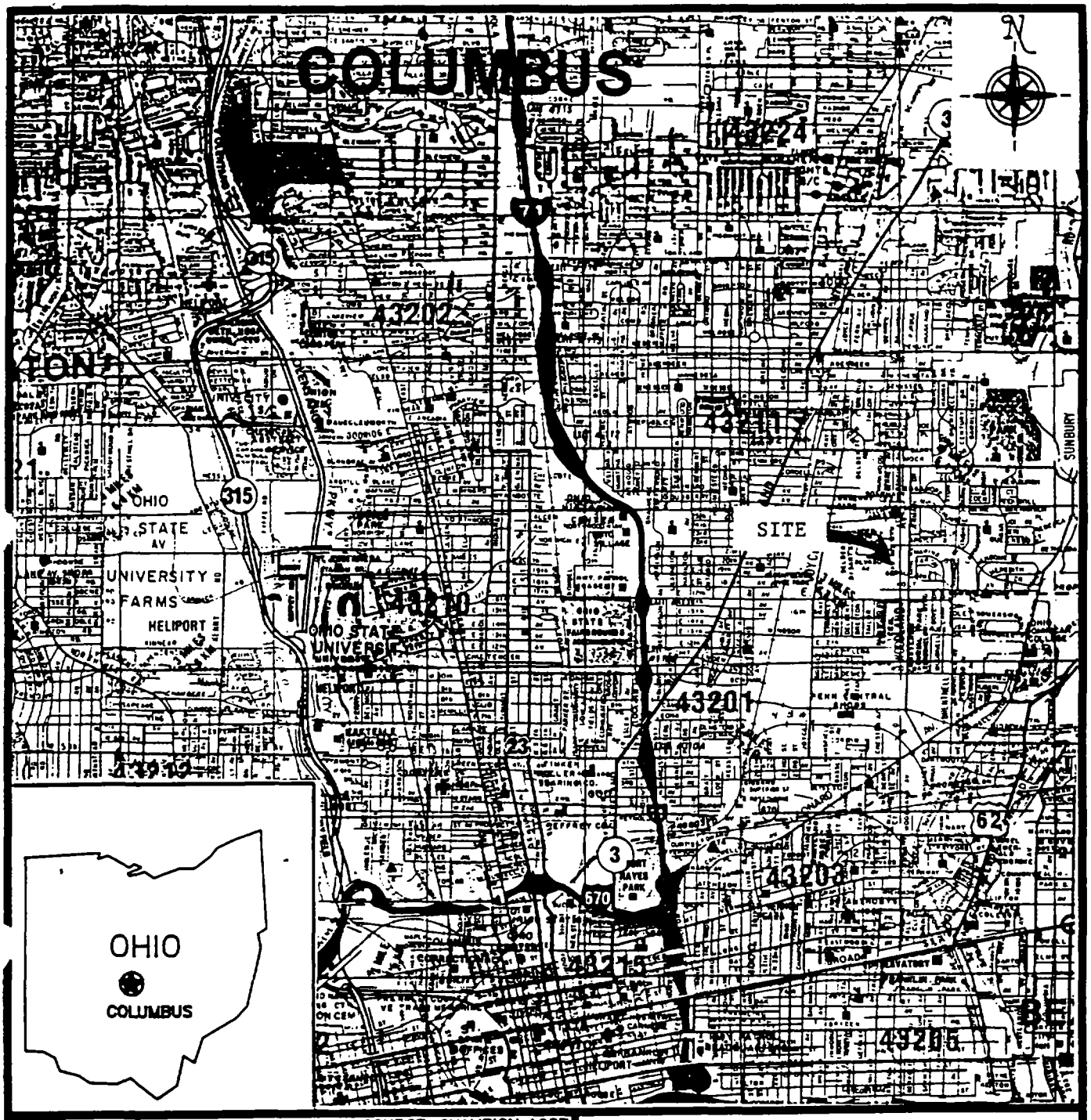
Site Investigation

On May 26, 1989, TAT members Jeff Binkley and Karen Combs inspected the site, accompanied by several OEPA personnel. The Denune/Westfall site is located at 1707 Woodland Avenue, along an access road in a commercial/industrial area near downtown Columbus (Figure 1). The site is bordered by the City of Columbus Department of Human Services Environmental Blight Abatement Division to the east, and Green Magic Services, Inc. (a landscape and lawn care company) to the west. Across the access road to the south are Vampco Metal Products, Inc., and American Corrugated Products (ACP).

The TAT restricted its investigation to the immediate hazards outside of the facility, where they observed one dumpster, the roll-off box, and seven drums suspected to be contaminated with PCBs (Figure 2). At the time of the inspection, none of the drums, the dumpster, or the roll-off box were observed to be leaking, but a white substance (believed to be Askarel) was observed in the bottom of the 40-yd^3 roll-off box. In addition, the OEPA reported that one transformer carcass containing residual oil and two 5-gallon (gal) containers of oil (suspected to be contaminated with PCBs) were inside the facility.

A capacitor and an empty drum used for burning trash were observed between the 40-yd^3 roll-off box and the seven drums. A small bucket and another 55-gal drum (almost full) were also staged on the loading dock. Additionally, a white tank (approximately 500-gal capacity) labeled, "Liquid Oxygen, U.S. Air Force," was staged on a flat-bed truck near the seven drums. The TAT also observed several oil-stained areas on the loading dock.

Recent heavy rains in the area had caused minor flooding and drainage problems at the site. Because a major concern is the off-site migration of the PCB-contaminated material, the storm-water run-off pattern at the site was determined. The City of Columbus has separate storm and sanitary sewers, which allows independent treatment of each system. The water flow pattern at the site is to the southeast over concrete and gravel, across the access road, and into a storm sewer next to the ACP building. (The pathway is shown in Figure 2.) At the time of inspection, the storm drain was backed up, which created a large pool of water behind the ACP building.



MAP SOURCE: CHAMPION 1987

FIGURE 1

SITE LOCATION MAP

DENUNE/WESTFALL SITE

COLUMBUS, OHIO

SCALE 1 INCH = 5000 FEET

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MANAGERS DESIGNERS/CONSULTANTS

DRAWN BY K. COMBS	DATE 06-21-89	PCS # 2236
APPROVED BY J. BINKLEY	DATE 06-21-89	TDD # 5-8905-22

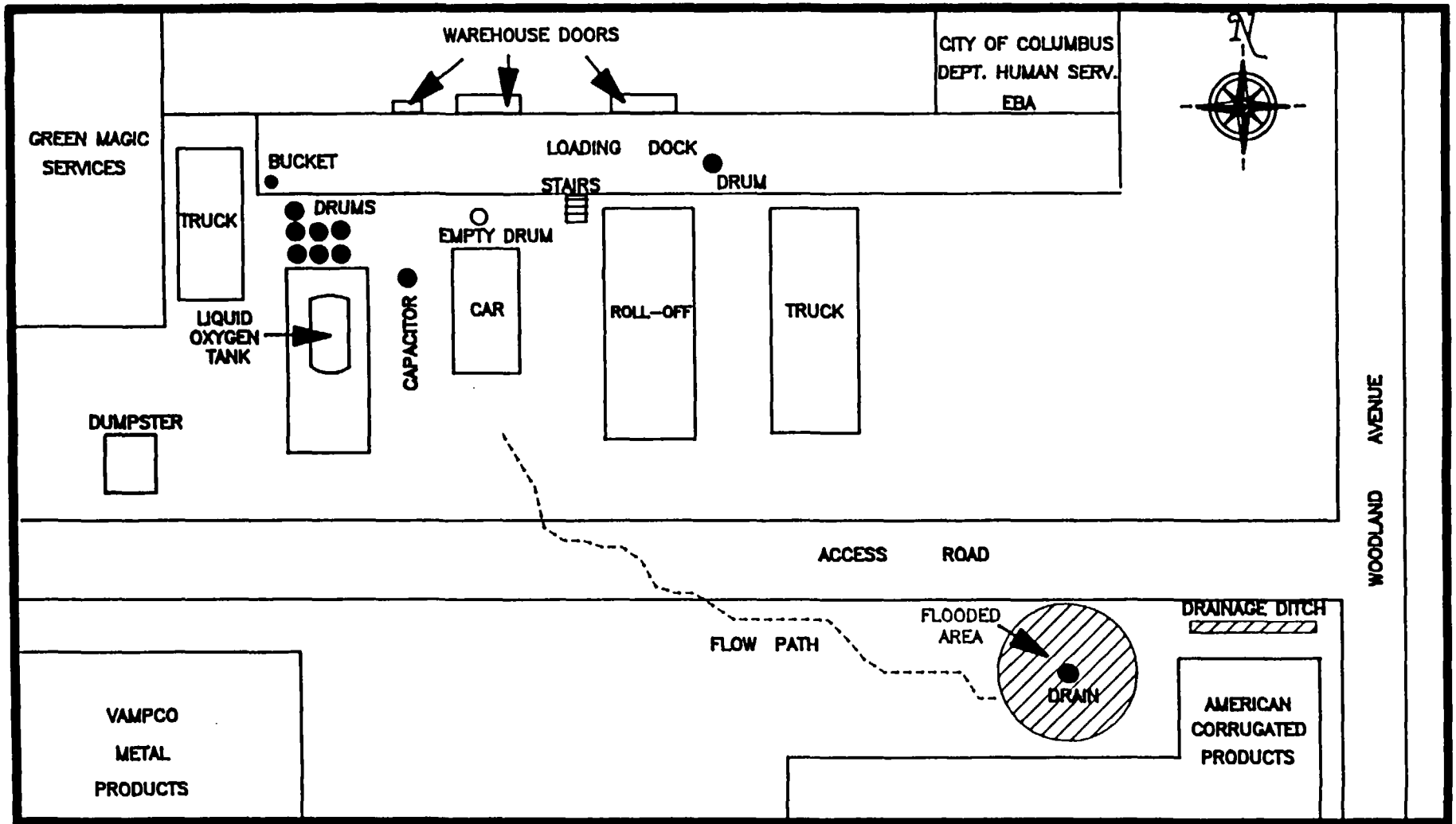

FIGURE 2

SITE MAP

DENUNE/WESTFALL SITE

COLUMBUS, OHIO

APPROXIMATE SCALE 1" = 18'

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN BY K. COMBS KC	DATE 06-16-89	PCS # 2236
APPROVED BY J. BINKLEY JB	DATE 06-16-89	TDD # 5-8905-22

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As a temporary measure, the OEPA covered the trash dumpster and roll-off box with Visqueen to prevent further contamination.

Analytical Results

The TAT did not collect any samples during the site investigation; however, the OEPA collected 18 samples at the site during May 24-26, 1989. Table 1 lists the OEPA sample locations and results of the sample analyses received. The samples were analyzed by Wadsworth/Alert Laboratories in Canton, Ohio, and analytical results revealed elevated concentrations of PCBs in all of the matrices analyzed, with the highest concentration in Drum TW01 (990,000 milligrams per kilogram [mg/kg] PCB). A swipe sample (sample No. 10) of an oil-stained area indicated a surface concentration of 95,000 micrograms (ug) per 100 square centimeter (cm^2) PCB.

Current regulations under the Toxic Substance Control Act (TSCA) require specific management/disposal requirements for materials containing PCB concentrations greater than 50 ppm. In addition, the U.S. EPA has established a National PCB Spill Cleanup Policy (52 FR10688), which outlines cleanup standards for PCB releases. The cleanup standard for indoor, nonrestricted, potentially high contact surfaces (10 ug/100 cm^2), which applies to the interior of the Denune/Westfall site, is of particular note. All of the OEPA analytical results received exceeded the PCB cleanup standards.

Threats to Health and the Environment

Based on the results of sampling conducted by the OEPA and observations at the site, several conditions are present at the Denune/Westfall site, which may be considered to warrant a removal action under Section 300.65(b)(2) of the National Contingency Plan. These conditions are:

- Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals or food chain;
- Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

TABLE 1

ANALYTICAL RESULTS OF SAMPLING PERFORMED BY OEPA[1]
DENUNE/WESTFALL SITE
COLUMBUS, OHIO

Sample No.	Sample Location	Date Collected	PCB Concentration and Arochlor
1	Drum TW01	5/24/89	990,000 mg/kg (PCB-1254)
2	Drum TW02	5/24/89	280,000 mg/kg (PCB-1260)
3	Drum TW03	5/24/89	520,000 mg/kg (PCB-1254)
4	Oil from transformer in scrap metal container	5/24/89	910,000 mg/kg (PCB-1254)
5	Liquid from bottom of scrap metal container	5/24/89	500 mg/kg (PCB-1254)
6	Paper windings inside trash dumpster	5/24/89	270,000 mg/kg (PCB-1254)
7	Oil from transformer inside building	5/25/89	470,000 mg/kg (PCB-1254)
8	5-gal bucket (clear oil)	5/25/89	240,000 mg/kg (PCB-1260)
9	Oil from 5-gal bucket (brown)	5/25/89	190,000 mg/kg (PCB-1260)
10	100 cm^2 wipe (oil stain near transformer)	5/25/89	95,000 ug (PCB-1260)
11	100 cm^2 wipe (front entrance)	5/25/89	7,400 ug (PCB-1254)
12	100 cm^2 wipe (rear entrance)	5/25/89	1,100 ug (PCB-1254)
13	White substance in liquid oxygen tank	5/25/89	NA*
14	100 cm^2 wipe (lamination in roll-off box)	5/25/89	17,000 ug (PCB-1254)

(CONTINUED)

TABLE 1 (CONTINUED)

ANALYTICAL RESULTS OF SAMPLING PERFORMED BY OEPA
DENUNE/WESTFALL SITE
COLUMBUS, OHIO

Sample No.	Sample Location	Date Collected	PCB Concentration and Arochlor
15	100 cm^2 wipe of lamination	5/25/89	130,000 ug (PCB-1254)
16	Blank wipe	5/25/89	4 (PCB-1254)
17	Drum TW06	5/26/89	230,000 mg/kg (PCB-1260)
18	Drum TW07	5/26/89	250,000 mg/kg (PCB-1260)

[1]All samples analyzed by Wadsworth/Alert Laboratories, Canton, Ohio.

*Not Analyzed.

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- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

Threat of Exposure

The Denune/Westfall site is located in a heavily trafficked commercial/industrial area. Most of the contaminated materials are in the loading dock area, where access to the materials is unrestricted, and no security personnel are employed.

Threat of Release

The drums, roll-off box, and dumpster are all located outside of the facility in the loading dock area, and thus they are exposed to the elements. Although none of the containers appeared to be leaking at the time of the inspection, the structural integrity of the containers is unknown. Also on the loading dock an uncovered 5-gal bucket (suspected to contain PCB-contaminated oil) which could easily be overturned, was observed.

Inclement Weather

Continued heavy rains in the area have created drainage and flooding problems at the site. To prevent additional PCB-rainwater contamination, the OEPA has covered, as a temporary measure, both the dumpster and roll-off box with visqueen. However, the drums and the 5-gal bucket staged on the loading dock remain exposed to the elements. Furthermore, the potential exists for PCB-contaminated oil to wash from spill areas in the loading dock area and migrate along the waterflow path outlined in Figure 2.

Threats From PCBs

Sample results have documented high concentrations of PCBs at the site. Based on available data, the International Agency for Research on Cancer (IARC, 1978) has concluded that PCBs are considered a potential human carcinogen. It is clear that a minimum exposure to PCBs can produce dermatological effects and liver damage. Because PCBs have a long life and tend to bioaccumulate in various human tissues, the potential of chronic and delayed effects is substantially increased.

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Removal Costs

Because of the hazards associated with the site, site accessibility, and the potential release of highly concentrated PCB-contaminated materials, the TAT prepared a removal action plan and cost estimates for the Denune/Westfall site. The following plan and cost estimate, which is presented in Attachment A, projects removal to require 11 days at a cost of approximately $194,000.00.

Develop Site Safety and Work Plan

U.S. EPA, TAT, and the Emergency Response Cleanup Services contractor will meet before the cleanup action to determine the removal goals, plan of action, and delegation of responsibilities. A site safety plan will be prepared to identify the work zones, personal protection required, associated risks, and decontamination procedures.

Site Security and Administration

Because the Denune/Westfall site is highly accessible, access restriction will be necessary to minimize exposure to the hazardous materials, to prevent vandalism, and to protect the equipment on site. A security service will be employed to protect the site during nonworking hours and provide necessary security.

Office and decontamination trailers will be mobilized to the site to provide support for response personnel. Both trailers will be located on site or in an adjacent area and equipped with telephones and electricity.

Containerize PCB-Contaminated (Askarel) Liquids

The estimated nine drums of Askarel on site will be placed in 85-gal overpacks and staged for disposal. Likewise, the estimated three 5-gal pails of Askarel will be placed in a single drum and also staged for disposal. An estimated 650 gallons of Askarel in the bottom of the 40 yd^3 roll-off box will be pumped into 55-gal drums and also staged for disposal.

Transfer of PCB-Contaminated Debris

Two 20-yd^3, lined, hazardous material roll-off boxes will be mobilized to the site and placed adjacent to the 40-yd^3 roll-off box. All debris will be transferred using a backhoe or manually from the 40-yd^3 roll-off box and the dumpster into the two 20-yd^3 roll-off boxes.

Decontamination of Roll-Off Box and Dumpster

The roll-off box and dumpster will be decontaminated using a steam jenny to apply a mixture of pentanone and water. Decontamination liquid will be collected and placed in an estimated five 55-gal drums. Following decontamination, post-cleanup swipe sampling will be conducted to confirm that cleanup standards were achieved.

Decontamination of PCB-Oil-Stained Areas

Prior to proceeding with the decontamination of the estimated 6,500 ft^2 of stained floor surfaces in the loading dock area and inside the facility, a vertical and horizontal extent-of-contamination survey will be necessary. The type of decontamination process selected will depend on the vertical extent-of-contamination sampling results. The technique proposed would be a surficial decontamination only. If the contamination extends below the surface, the concrete may require scabbling or removal. The surficial decontamination process will proceed as follows: Apply Mark-Off Plus surfactant/water mixture to stained surfaces; scrub area with wire-brushed floor buffers; collect liquid with a shop-vac. This process may be repeated, if PCB concentrations are not adequately reduced during the initial process. Post-cleanup swipe sampling will also be required to ensure that an acceptable cleanup level (10 ug/100 cm^2) is achieved. The decontamination liquid will be collected in approximately thirty 55-gal drums and staged for disposal.

Off-Site Disposal of PCB Oils and Debris

All PCB-contaminated liquids will be transported off site for incineration at a TSCA-permitted facility. The Aptus Incinerator, Coffeyville, Kansas, which is currently in compliance, was used for estimation of transportation and disposal costs. PCB-contaminated

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debris will also be transported to an approved facility for landfilling, and the Chemical Waste Management Landfill in Emelle, Alabama, was used to estimate these costs.

The following four waste streams are estimated to require transportation off site:

57 Drums of PCB-contaminated liquids (9 overpacks, and forty-eight 55-gal drums for incineration).

40 yd^3 PCB-contaminated debris for landfill

4 Transformer carcasses for landfill/decontamination

1 PCB capacitor for incineration

Although disposal arrangements may alter the estimate, a minimum of five truckloads are required to transport the following materials off site:

2 Loads to transport the two 20-yd^3 roll-off boxes

2 Loads to transport the 57 drums and one intact PCB capacitor

1 Load to transport the four transformer carcasses.

Should you have any questions or require additional information, please feel free to contact us.

Very truly yours,

ROY F. WESTON, INC.

Sally Metz

for Karen Combs
Biologist

Phillip Wicklein
Technical Assistance Team
Leader, Region V

KC/dn
att.

REFERENCE

IARC (International Agency for Research on Cancer), 1978
IARC monographs on the evaluation of the carcinogenic risk of chemicals to humans. Polychlorinated biphenyls and polybrominated biphenyls. IARC, vol. 18. Lyon, France:WHO.

ATTACHMENT A

REMOVAL COST ESTIMATE

Redacted-information not relevant to selection of removal.

ATTACHMENT B

SITE PHOTOGRAPHS

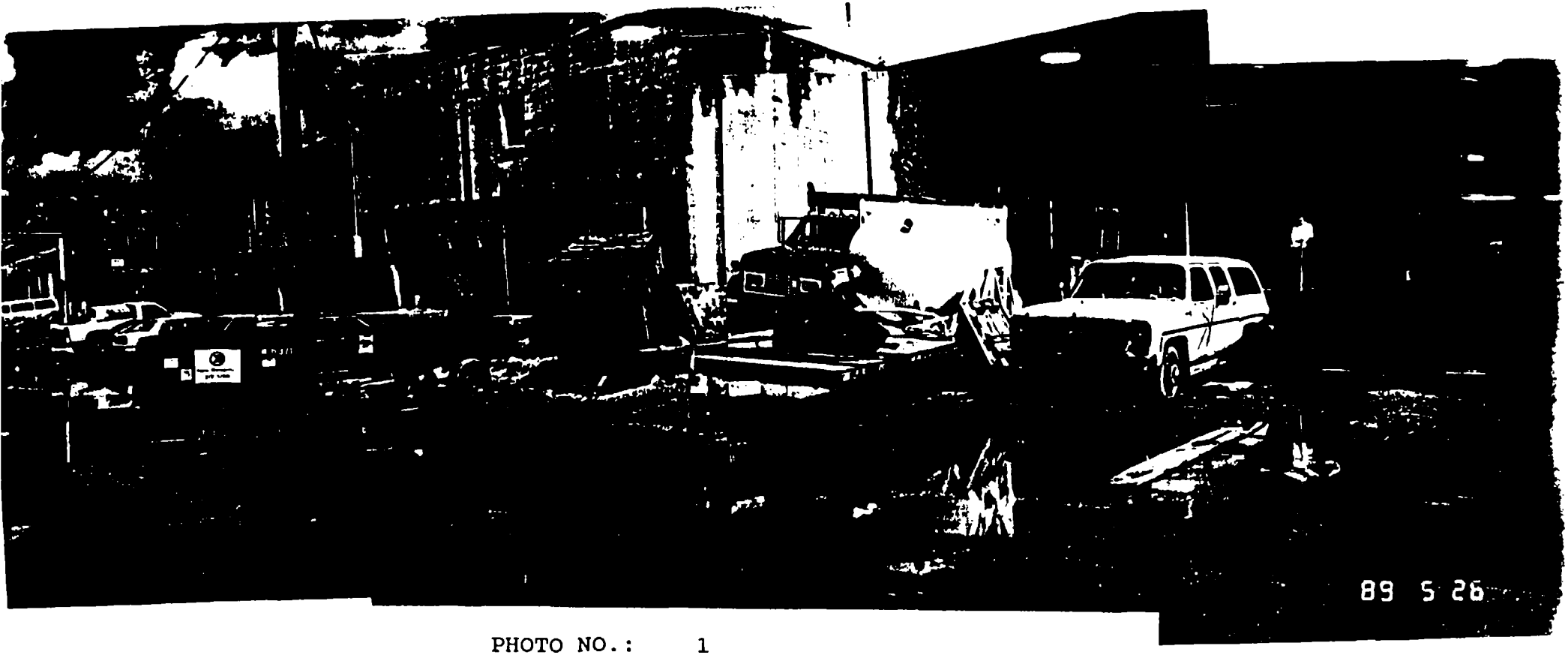

PHOTO NO.: 1
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Panoramic view of site. From left to right note dumpster, liquid oxygen tank, and roll-off box.
PHOTOGRAPHER: J. Binkley

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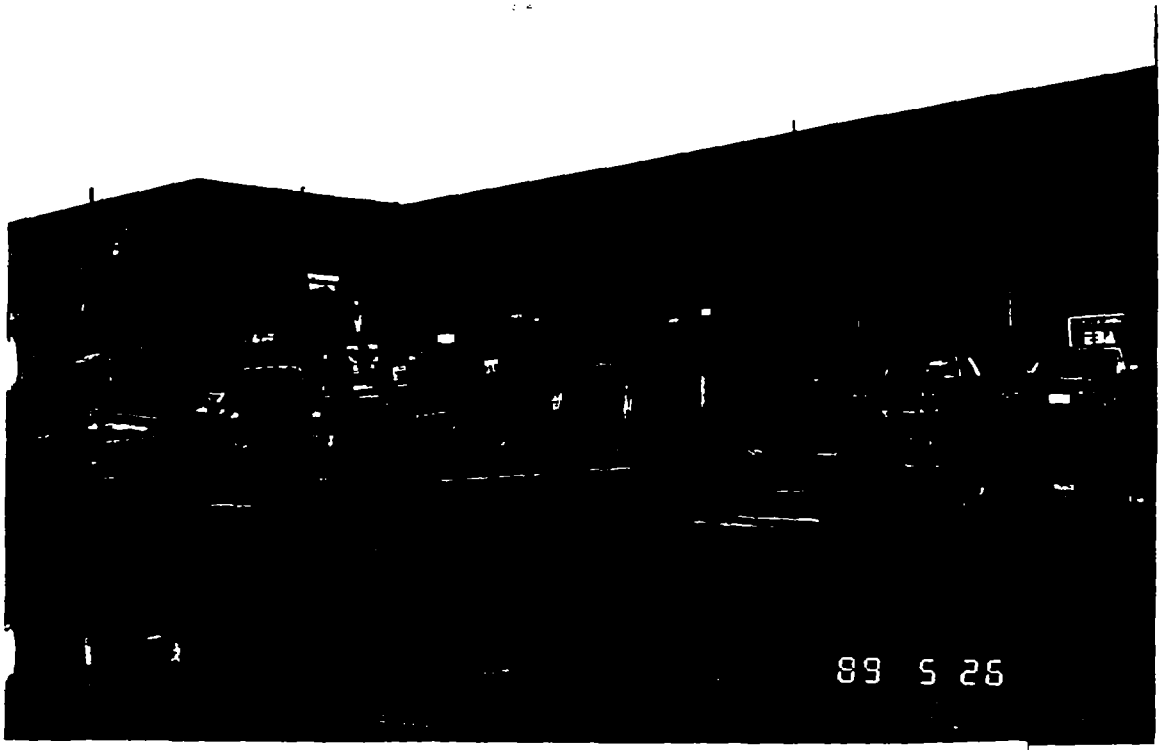

PHOTO NO.: 2
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Semi-trailer reportedly owned by site tenant.
PHOTOGRAPHER: J. Binkley

PHOTO NO.: 3
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Seven of the eight drums on site staged in loading dock area. OEPA sampled three of these drums for PCB analysis.
PHOTOGRAPHER: J. Binkley

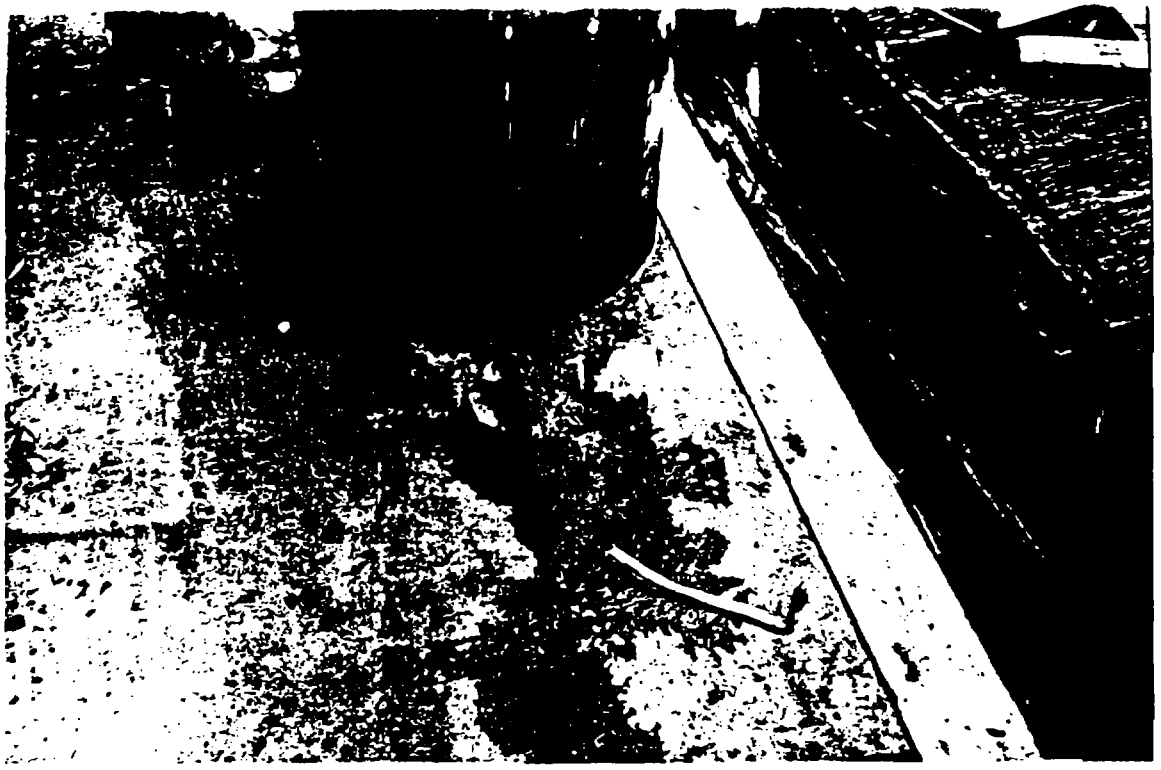

PHOTO NO.: 4
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Material spilled or leaked near drum staged on loading dock.
PHOTOGRAPHER: J. Binkley

PHOTO NO.: 5
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Five-gallon bucket suspected to contain PCB transformer oil.
PHOTOGRAPHER: J. Binkley

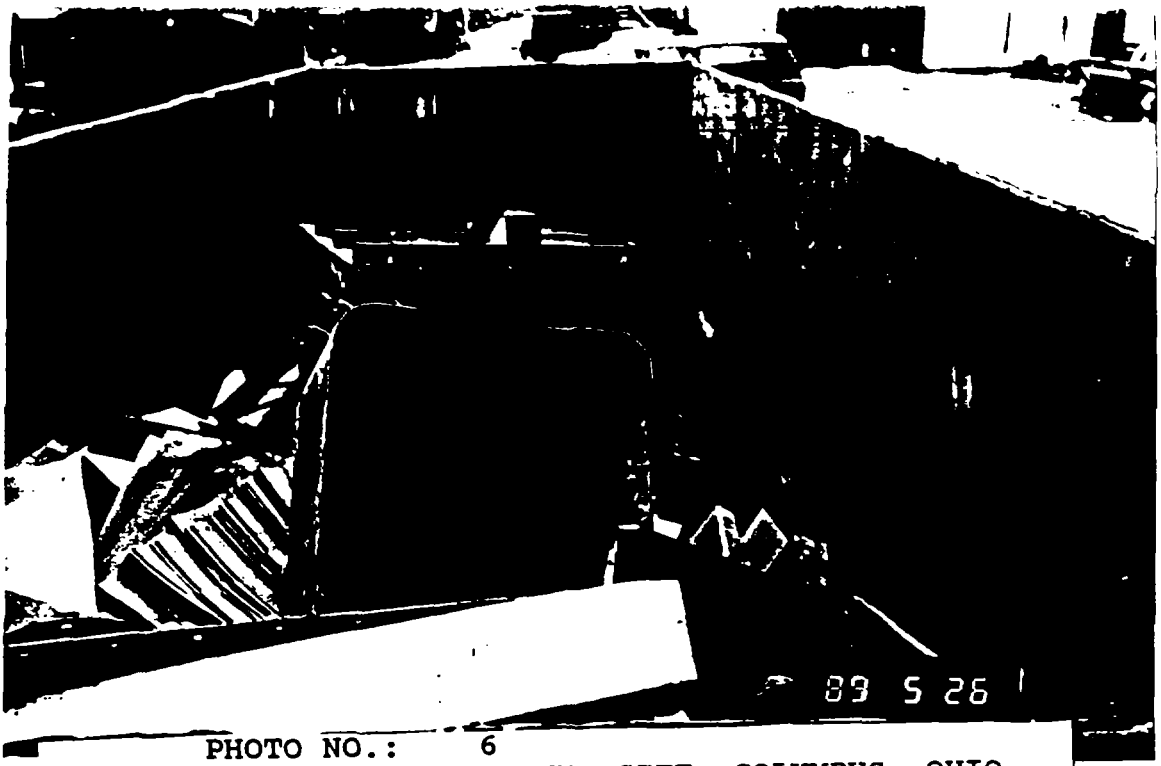

PHOTO NO.: 6
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Debris staged in roll-off box. Note transformer carcass in background.
PHOTOGRAPHER: J. Binkley

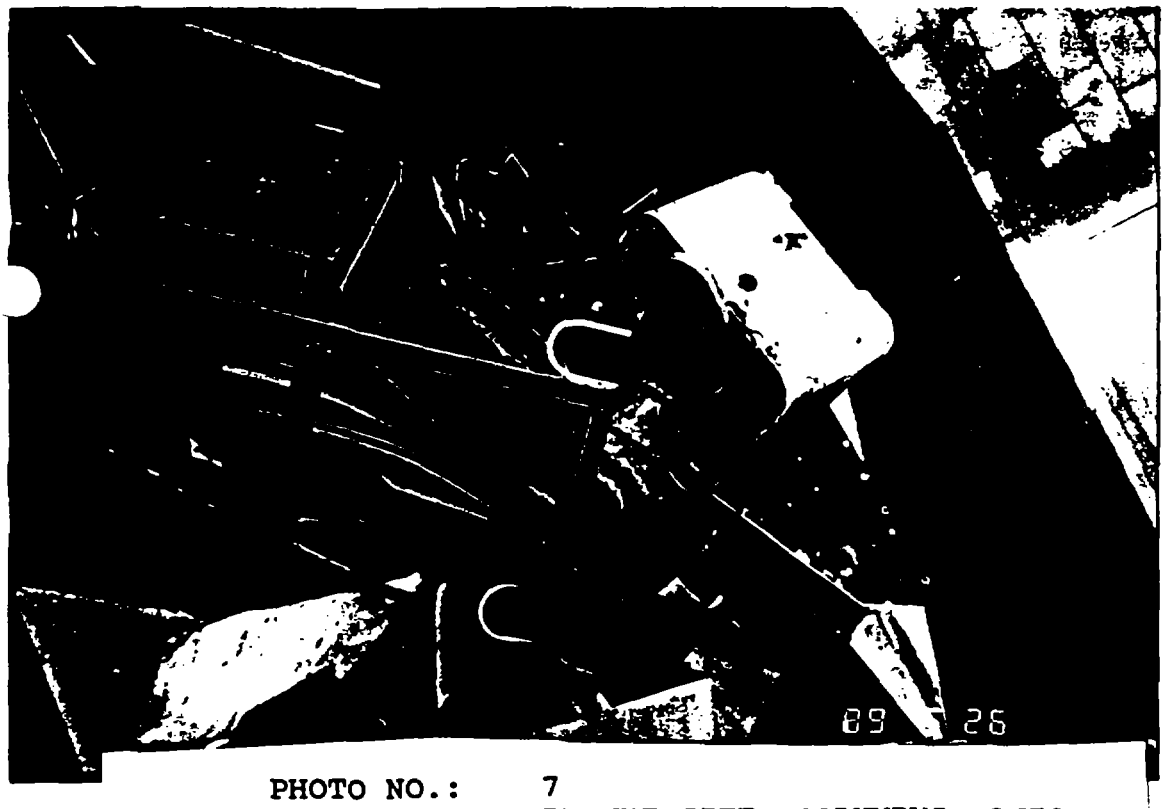

PHOTO NO.: 7
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Debris staged in roll-off box. Note transformer plates.
PHOTOGRAPHER: J. Binkley

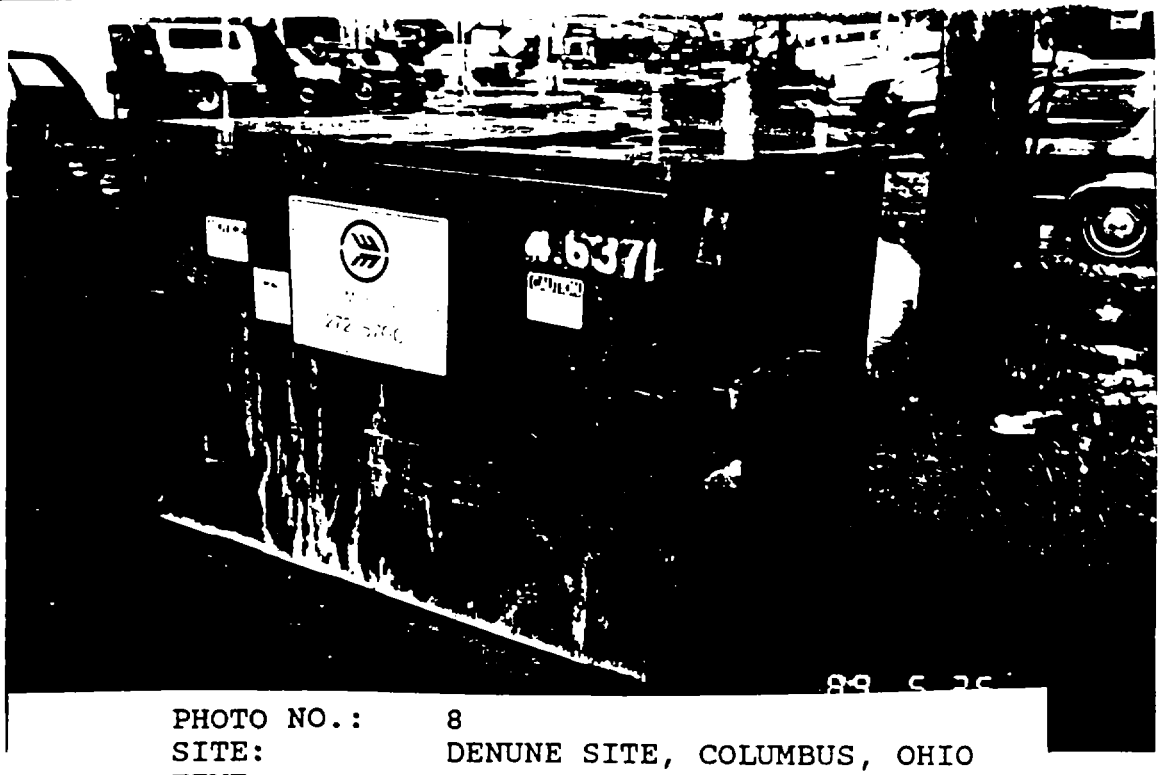

PHOTO NO.: 8
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Dumpster containing PCB transformer debris. Note PCB warning stickers placed on dumpster by OEPA.
PHOTOGRAPHER: J. Binkley

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PHOTO NO.: 9
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Dumpster containing PCB transformer debris after being covered by OEPA officials.
PHOTOGRAPHER: J. Binkley

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PHOTO NO.: 10
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: A reported (OEPA) mineral spirits capacitor staged in loading dock.
PHOTOGRAPHER: J. Binkley

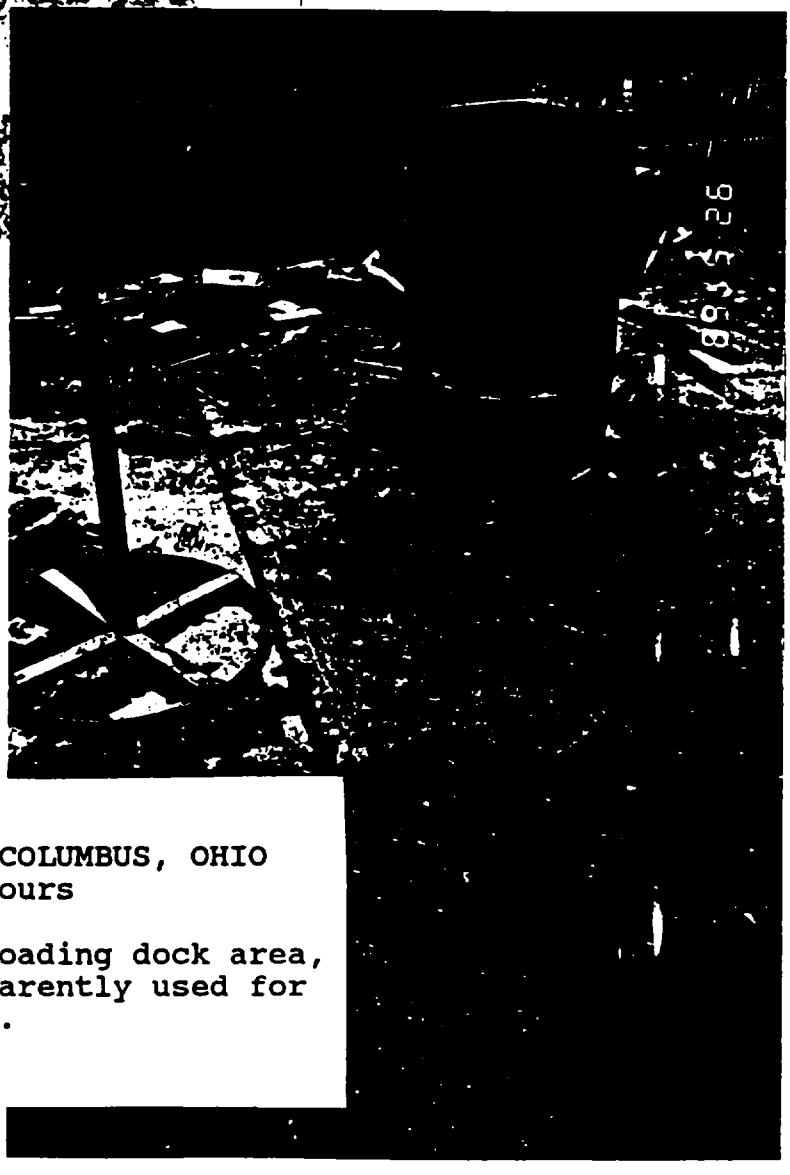

PHOTO NO.: 11
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: A barrel in loading dock area, which was apparently used for burning trash.
PHOTOGRAPHER: J. Binkley

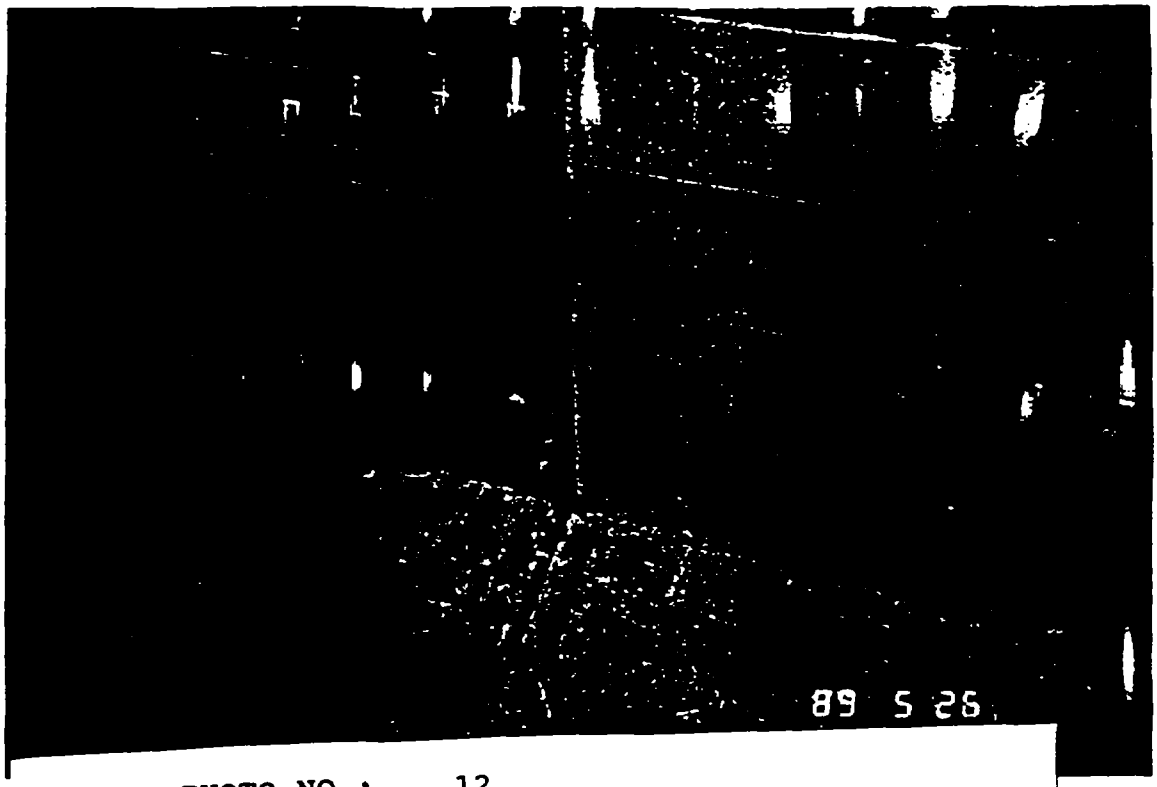

PHOTO NO.: 12
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Oil-stained loading dock surface near warehouse door.

PHOTOGRAPHER: J. Binkley

000022

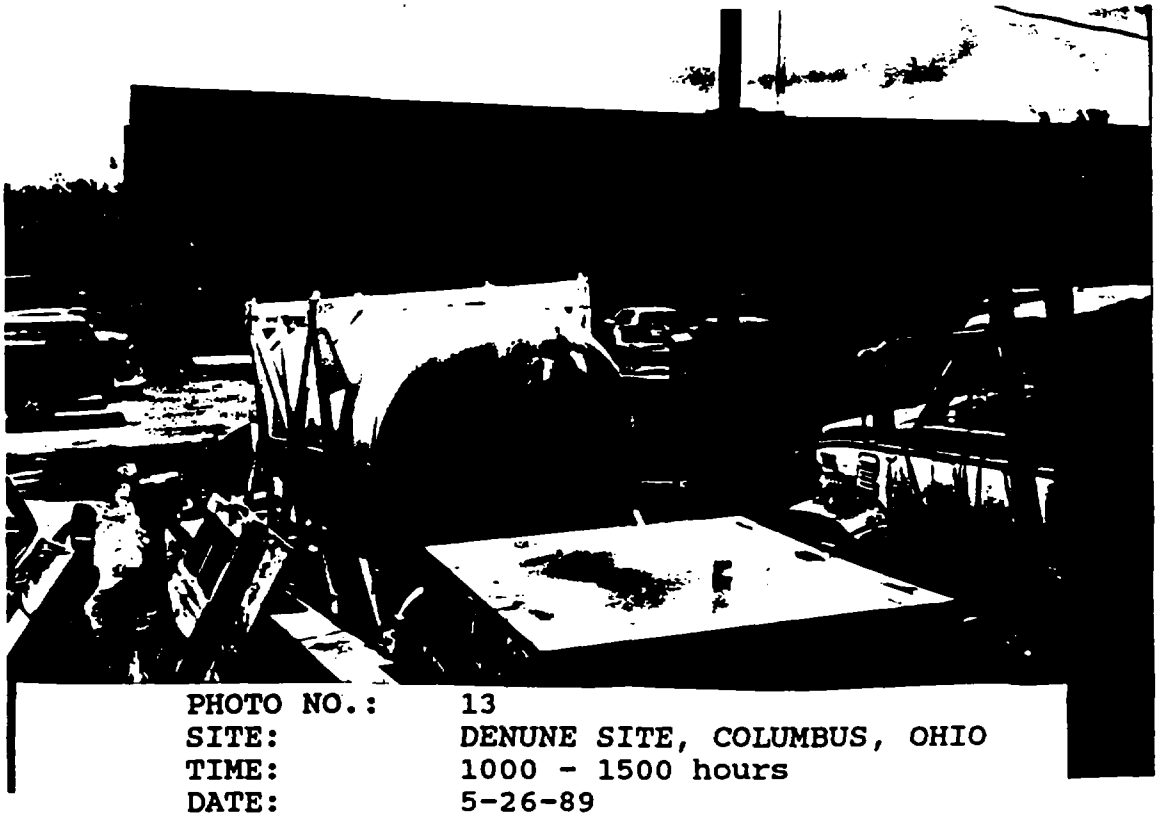

PHOTO NO.: 13
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Liquid oxygen tank situated on trailer parked in loading dock. According to OEPA, the tank contained a white powder material.

PHOTOGRAPHER: J. Binkley

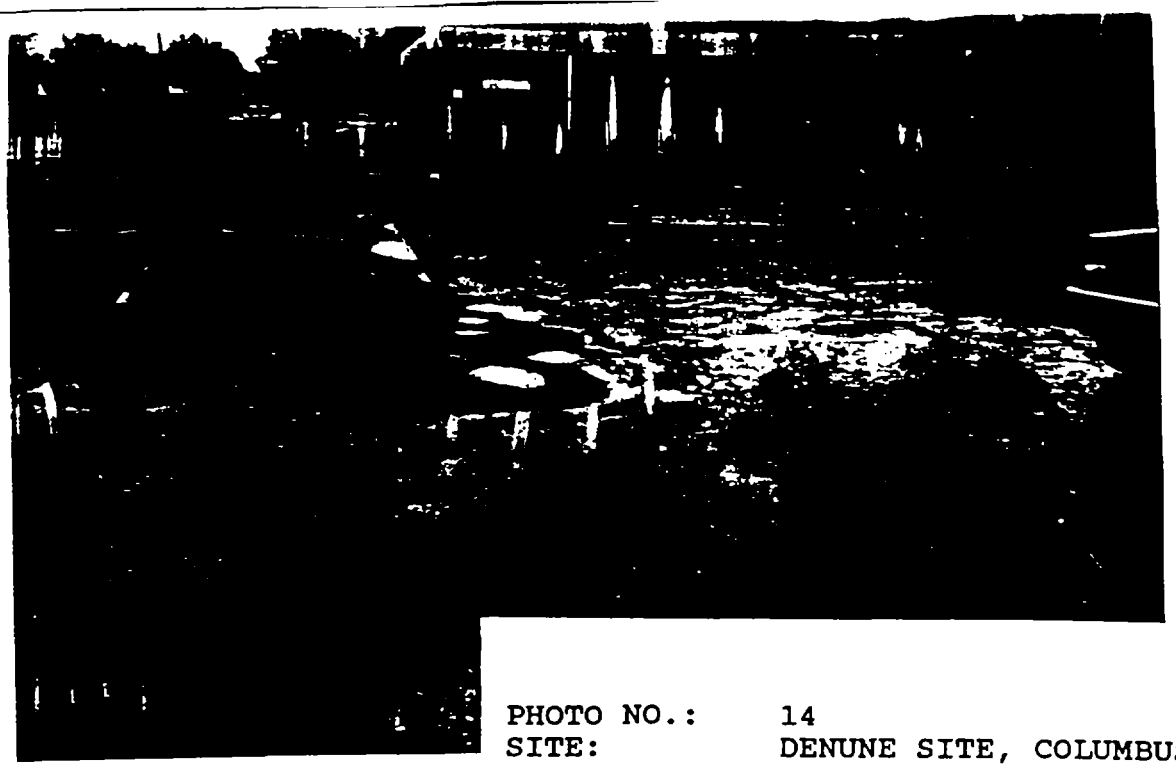

PHOTO NO.: 14
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Surface runoff migrated east from the loading dock to a drainage ditch (Photo 15), which enters into the Columbus sewer system. No drains were located within the loading dock area.
PHOTOGRAPHER: J. Binkley

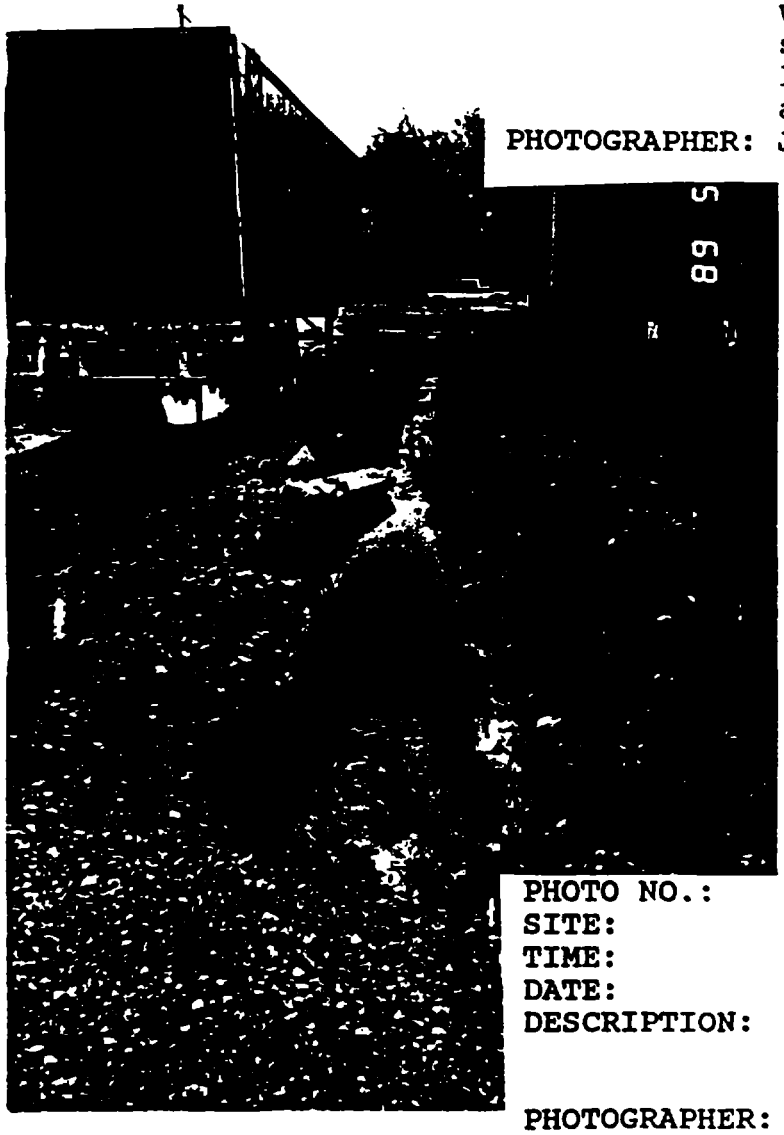

PHOTO NO.: 15
SITE: DENUNE SITE, COLUMBUS, OHIO
TIME: 1000 - 1500 hours
DATE: 5-26-89
DESCRIPTION: Surface runoff entered this ditch prior to discharge into the Columbus Sewer System.
PHOTOGRAPHER: J. Binkley